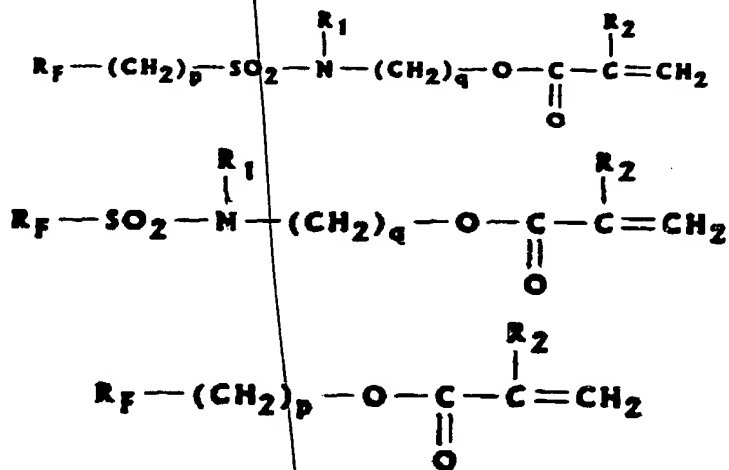


CLAIMS

1. Process for producing fluorinated  
polymers by miniemulsion polymerization in two stages  
5 comprising  
a) the emulsification of a mixture of  
monomers comprising:  
from 20 to 99.9% by weight of at least one  
monomer chosen from fluorinated (meth)acrylic monomers  
10 (A),  
from 0.1 to 15% by weight of at least one  
monomer chosen from acrylamide and its derivatives,  
such as N-methylolacrylamide, and  
from 0 to 65% by weight of at least one  
15 monomer chosen from nonfluorinated acrylic or vinyl  
monomers (B),  
using energetic emulsifying means, such as  
ultrasound, colloid mill or high-pressure homogenizer,  
and  
20 b) the polymerization of the said mixture at  
a temperature ranging from 20 to 100°C using radical  
initiators,  
the level of organic cosolvent being less  
than 0.2% by weight of the total weight of the  
25 emulsion.
2. Process according to Claim 1,  
characterized in that the mixture of monomers is

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5                    3.     Process according to Claim 1 or 2,  
characterized in that the fluorinated monomer A is  
chosen from the group comprising the monomers  
corresponding to the following formulae:



in which  $R_F$  represents a perfluorinated radical with a linear or branched chain comprising 2 to 20 carbon atoms, p and q, which are identical or different, each represent an integer ranging from 1 to 20 and preferably from 1 to 4,  $R_1$  represents a linear or branched alkyl radical comprising from 1 to 4 carbon atoms and  $R_2$  represents a hydrogen atom or a methyl radical.

4. Process according to one of the preceding claims, characterized in that the monomer B is chosen from the group comprising:

- C<sub>1</sub>-C<sub>22</sub> alkyl (meth)acrylates
- 5 - (meth)acrylates, the radical of which carries an oxyethylenated linkage
- vinyl monomers, such as vinyl chloride or vinyl acetate
- acrylic and methacrylic acids.

10 5. Process according to one of the preceding claims, characterized in that the initiator is chosen from the group comprising:

- peroxides
- persalts, such as persulphates
- 15 - azo compounds, such as 4,4'-azobis (4-cyanopentanoic acid).

6. Aqueous dispersion of fluorinated polymers as may be obtained according to the process of any one of the preceding claims, the content of organic  
20 cosolvent of which is less than 0.2% by weight of the total weight of the emulsion and the level of coagulum being less than 1% by weight of the total weight of monomers.

7. Application of the aqueous dispersion of  
25 Claim 6 in the hydrophobic and oleophobic treatment of various substrates, such as leather, textiles, fitted carpets, paper and construction materials.

add A27

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